

823364

HOLE NUMBER: AJ91-1

MINNOVA INC. DRILL HOLE RECORD

IMPERIAL UNITS:

METRIC UNITS: X

PROJECT NAME: ATHELSTAN-JACKPOT	PLOTTING COORDS GRID: DRILL GRID	ALTERNATE COORDS GRID:	COLLAR DIP: -88° 0' 0"
PROJECT NUMBER: 666	NORTH: 100.00N	NORTH: 2+97N	LENGTH OF THE HOLE: 216.41m
CLAIM NUMBER:	EAST: 410.00W	EAST: 2+83W	START DEPTH: 0.00m
LOCATION:	ELEV: 1295.00	ELEV: 1295.00	FINAL DEPTH: 216.41m
	COLLAR GRID AZIMUTH: 0° 0' 0"	COLLAR ASTRONOMIC AZIMUTH: 230° 0' 0"	
DATE STARTED: May 27, 1991	COLLAR SURVEY: NO	PULSE EM SURVEY: NO	CONTRACTOR: Leclerc Drilling
DATE COMPLETED: May 29, 1991	MULTISHOT SURVEY: NO	PLUGGED: NO	CASING: Pulled
DATE LOGGED: May 29, 1991	RQD LOG: NO	HOLE SIZE: NQ	CORE STORAGE: Greenwood

PURPOSE: Structural Hole: Test thrust

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	
30.48	-	-88° 0'	ACID	OK		
60.96	-	-87° 0'	ACID	OK		
91.44	-	-87° 0'	ACID	OK		
121.92	-	-87° 0'	ACID	OK		
152.42	-	-86° 0'	ACID	OK		
182.88	-	-88° 0'	ACID			
-	-	-	-	-		
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FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 3.35	«CASING»					
3.35 TO 48.28	«LIST» Listwanite	<p>Colour: Variable Grain Size: Variable</p> <p>3.35-5.25m Colour: Dark green to brown to grey-white mottled with zones containing black specks Moderate Magnetism</p> <p>5.25-9.75m «DYKE» Colour: Light brown with creme, grey green and rusty brown specks Grain Size: Groundmass- fine to medium grained (<0.5mm) Phenocrysts- 1-4mm Uniform texture and alteration Phenocrysts: feldspar - euhedral-subhedral 5% altered quartz - 5-10% Not magnetic</p> <p>9.75-27.60m Listwanite</p> <p>9.75-14.02m Colour: Rusty Fe carb Brown colour with zones of grey and whites</p>	<p>35</p> <p>45</p> <p>30</p>	<p>3.35-5.25m Strong Alteration Carb/Fe Carb - strong Silicification - weak 4.60-5.25m Increase silicification (moderate - strong)</p> <p>5.25-9.75m Weak to moderate carbonate/Fe carbonate alteration Weak talc alteration</p> <p>.... 6.55m Carbonate Veinlet</p> <p>9.75-27.60m Strongly altered Quartz, carbonate Patches of maraposite</p> <p>9.75-14.02m Very strong Fe carb/carb alt - mainly as veins and veinlets Moderate quartz veinlets 1-2% maraposite</p> <p>..... 11.85m Fe carb stringers 12.60m Fe carb and maraposite stringers</p> <p>12.60-12.86m Very little Fe carb or carbonate Increase in quartz</p> <p>13.57m Vuggy quartz carbonate vein</p>	<p>3.35-5.25m Mt Py 1-2% fg, diss 4.60-5.25m Py 3-5%, fg, as blebs and stringers</p> <p>5.25-9.75m No sulphides</p> <p>9.75-14.02m tr-1% py</p> <p>12.60-12.86m 1-2% py, fg in blebs (assoc with qz?) 1% mt (weakly magnetic)</p>	<p>3.95-4.60m Fault 4.22m CA 45 deg, 4.55m CA 08 deg Gouged and broken up Very strong Fe carb</p> <p>Tertiary ???</p>

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		14.02-20.02m Colour: Predominantly pink, grey, and white in colour with areas of green (pink becomes purplish near 18.30m) Quartz veins cut and crisscross the pink, white mottled (with grey fleck) alteration [pink/white alt influenced by quartz veins??]		14.02-20.02m Strong silicification Increase in size and amount of quartz veins Hem ? (pink to purple colouring)	14.02-20.02m 1-2% diss py, fg 14.1m Py stringer 85 deg CA	
			55	... 14.22m Quartz vein, 1.2cm width		
			45	... 14.55m Banded chalcedonic, vuggy ~4cm x 1cm		
			75	... 14.80m Quartz vein, weakly banded 2cm width		
		16.0-16.8m Green, soft, with black specks		16.0-16.8m Mod-strong(?) talc alt 16.8m Alteration contact??? 30 deg CA	16.0-16.8m Trace pyrite	
		17.23-18.00m Colour: Medium green Soft		17.23-18.00m Weak carbonate alt Weak quartz alteration (vn) Serp?	17.23-18.00m Trace pyrite	
		20.02-22.37m Quartz vein (Bull quartz, drilling ~ down dip of the vein) Quartz vein contact with host rock at:				
		20.07m ...	27			
		20.34m ...	11			
		20.70m ...	00			
		20.72m ...	02			
		21.50m ...	37			
		22.05m ...	25			
		22.37m ...	60			
		21.50-22.05m Host rock: Grey green mottled colouring		21.50-22.05m Silicified Weak carbonate		
		22.37-23.94m Colour: Medium-light green with pale green blebs		22.37-23.94m Quartz stringers (low density) --> Silicification, mod. Weak carbonate alteration	22.37-23.94m 1% pyrite, diss, fg blebs	
			52	23.60m Foliation/veining		
			33	25.96m Veining		
		23.94-26.21m Colour: Dark purply grey mottled, plus white qz and carb vns and vnlts Brecciated 23.94-24.12m, 24.81-25.1m, 25.45-25.67m: Colour: orange brown		23.94-26.21m Quartz and carb veins (avg 1mm widths), Qz>carb Trace maraposite 23.94-24.12m, 24.81-25.1m, 25.45- 25.67m: Strong Fe carb	23.94-26.21m Weak magnetic patches po or mt? Tr py	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		24.81-25.52m Colour: White with pink and green mottled Very hard		24.81-25.52m Strong silicification		
		26.21-27.60m Colour: Pink with reddish and creme white mottled with dark specks Hard	35	26.21-27.60m Strong silicification (qz vns & vnlt) ... Avg of recent veining	26.21-27.60m 1% mt, tr fg diss py	
		27.43-27.60m Colour: Orange brown		27.43-27.60m Strong Fe carb		
		27.60-48.28 «St Def'n» Strong deformation zone Colour: Grey-green with white-creme qz and/or carb vns; some areas have dark patches Contorted beds Very deformed rock				
		Foliations: 28.24m	60			
		30.52m	62			
		32.70m	45			
		37.18m	55			
		37.80m	45			
		39.15m	50			
		43.65m	50			
		27.60-33.00m Very strongly foliated, deformed, and altered Moderately magnetic		27.60-33.00m Silicification (mod-strong) Weak carbonate alteration --> alt often along foliation, though not restricted to it. Later quartz vnlt/stringers cross cut the foliation	27.60-33.00m 1-3% py, fg, diss, sometimes as blebs; may be assoc. with foliation (particularly where quartz is)	
		28.44-32.63m Colour: Orange brown (contacts gradational)		28.44-28.63m Strong Fe carb 32.88m Vuggy carb vn, ~5mm width		
		33.00-34.39m Colour: Orange brown to grey	30	33.00-34.39m Moderate Fe carb alt 33.00m Vnlt-seems to be sharp where st carb alt begins		
			19 33.25m Vuggy carb vnlt		
			15 33.38m Vuggy carb vnlt		
			16 33.61m Vuggy carb vnlt 34.39m Gradational contact		
		34.39-38.42m Colour: Light green to greenish		34.39-38.42m Qtz and carb vns (low	34.39-38.42m 10% mt, tr-1% py	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		<p>white with black blebs (mt) Mottled to weakly foliated (ie mt as blebs diss and as agglomerates along foliations) Increase foliation with depth</p> <p>34.39-34.80m Colour: Greyish to white/creme Brecciated in some areas</p> <p>38.42-48.28m Colour: Creme-white to grey with occassional pink or green zones</p>		<p>density) Moderate talc alt</p> <p>34.39-34.80m Strong silicification</p> <p>38.42-48.28m Strong silicification Associated bleaching of rock Increase silicification and bleached appearance with depth Mod-strong talc alt</p>	<p>34.39-34.80m 3-4% py, 1% mt</p> <p>38.42-48.28m 3-5% mt Py as blebs, assoc with qtz vnlt</p> <p>38.82-39.40m 10-15% mt</p> <p>39.14-43.00m Increase in py/po? Py in larger blebs (blebs internally are fine grained); assoc with (selvages) or near veins</p> <p>Few examples of py blebs & vnlt: 39.14m Bleb, foliation 39.28m Blebs, vn envelope, 20 deg CA 39.30m Stringer, 55 deg CA 39.76m Stringer, 0 deg CA</p>	
48.28 TO 108.49	«SERP»	<p>Colour: Dark Green</p> <p>48.28-80.50m Moderate to strongly magnetic Weak/vague foliation (~45 deg CA) near upper contact, more massive with depth</p> <p>48.28m Upper contact</p> <p>80.50-80.82m Colour: Orange brown</p> <p>80.28-81.57m Diss fg black mineral, 1%, mt?</p>	45	<p>48.28-80.50m Carbonate vnlt (avg 0.5-1mm width); variable orientation Decrease in carbonate with depth Very weak talc alt</p> <p>63.80m Carb-serp vein, 1cm width 06 deg CA Fibrous mineral, asbestos, on fracture surfaces Veins increase ~76.00-80.50m</p> <p>80.50-80.82m Fe carb and silica</p> <p>81.45-81.50m Quartz vn, contains tr fg grey/black mineral</p> <p>80.28-81.57m Strong silicification, bleached</p>	<p>48.28-80.50m Py/po, tr, blebs, diss (blebs to 1cm) 63.77-64.00m 3-5% py (blebs)</p>	75.00m Small fault gouge, 4cm width

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		81.57-98.63m Colour: Green to light green brown Weakly foliated Sil/Bleached serp? or Intr/flow? Very contorted in areas Shearing as dior intrudes (fault contact)		81.57-98.63m Weak silicification Weak-mod carbonate	81.56-98.63m Trace pyrite	
		83.26-85.07m Felsic Intrusive: Dyke -->Dior Colour: White and grey speckled Stippled colouring Silicified dior?			83.26-85.07m Tr po -diss	
				85.20-85.92m Strong silicification	82.50-85.92m trace pyrite	
				87.20-87.40m Strong silicification		
				89.07-89.21m Strong silicification 89.21m		
		90.13-90.57m Serp wedge in alt serp/intr/flow? 93.26-94.30m Serp, weakly foliated in alt serp/ intr/flow? 93.40m Weak foliation	40			
			40			
		95.51-98.63m Quartz vein, py zone (drilling approx down dip of vein)	45 50	... 95.51m Beginning of silicification ... 95.64-95.7m Quartz vein Vuggy, open spaced Weakly banded 1% maraposite	95.51-96.63m Tr sp, 2-5% py	
			05 96.05m Vn + py		
			15 96.37m Vn + py		
			13 97.40m Vn, vuggy, tr dark mineral down center of vein		
		98.63-108.49m (returned to) Serpentinite Colour: Dark-med green Massive but weakly veined		98.63-108.49m Moderate carbonate alt (vnlt) Weak silicification V wk talc		
		99.90-101.01m Brecciated, Veined, Healed fault?		101.28-101.36m Quartz vein Banded 101.28m Vein		
		101.36-102.92m Massive Colour: Grey-green Very weakly mottled -->either sil + bleached serp or sil intrusive	50			
						103.12-103.20m Fault, 30 deg CA

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
						107.72m Mismatch
108.49 TO 114.57	«DIOR»	Colour: white to grey stippled, with greenish hew Grain Size: fine to medium grained Massive Weakly veined (<0.5mm, dark coloured)		Very weak carbonate Weak epidote/chlorite Moderate - strong silicification Trace maraposite	1-2% py 1% po 1% fg black mineral 112.50m 5% po	
114.57 TO 195.49	«SERP»	114.57-116.1m Colour: Lighter green to grey Moderately deformed --> alt intr blocks (dykes?) in serp 116.94-116.98m DYKE 118.05-125.85m Colour: Light brown to green brown to light green--> fault Brecciated zones ALT SERP? Few small fractures that offset veining by mm Stringers, very fine, high densits 124.05-124.45m Phenos? up to 2mm Hard, ~5.5-6 Misc shaped ¶125.85-128.25¶«LIST, ST DEF'N» Colour: Green to grey to white Very strongly deformed Foliated 1% fg black mineral (qz clasts) 126.98m foliation	65 65	114.57- Weak carbonate alt Trace maraposite near 114.57m Moderate silicification 118.05-125.85m Weak carbonate alt Moderate-strong silicification 125.85-128.25m Weak carbonate Trace maraposite Moderate to strong silicification Weak Talc 128.25-152.71m Weak carbonate alt (low density veinlets) 130.92-131.91m Strong silicification 132.89-133.67m High density veinlets (carbonate) Weak talc	118.05-125.85m 1% po, 1% py 118.27-118.30m 5% po, tr py 125.85-128.25m Tr py 130.92-131.91m tr-1% py	
130.92-131.91	«LIST»	Colour: White to green to pink mottled Strongly deformed/altered, yet massive 1-2% fg black mineral				
132.89-133.67	«LIST»	Colour: Dark green to white Moderate foliated				

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		133.52m Foliation	60	133.31m Vuggy calcite vein (1cm width) 136.34-136.75m Strong silicification 136.62m Open spaced, vuggy qz vn		
		¶136.34-136.75¶«LIST» Colour: White to grey to green Strongly altered Massive				
		¶138.30-141.14¶«LIST» Colour: White to green to grey Strong alt Massive 1-2% fg black mineral		138.30-141.14m Mod silicification	138.30-141.14m 2-3% py (stringers with quartz)	
		¶146.58-152.71¶«ALT SERP/LIST» Colour: Dark green with light green and reddish zones Massive with many stringers		146.58-152.71m Weak talc Moderate-strong carb	146.58-152.71m 1% py	143.62-143.68m Fault gouge 40 deg CA
		152.68-152.71m Fault contact	80			
		Clay, gouge				
		¶152.71-157.64¶«M DYKE» Colour: Dark green/grey mottled Grain Size: fine to medium grained Feldspars, euhedral to subhedral Mafics, pyroxenes? Massive, low density of fractures		152.71-157.64m Mod pervasive carb alt		
		157.64-158.31m Colour: Light grey-green to creme Mod-strong alt Soft		157.64-158.31m Weak talc, weak-mod Carbonate		157.64-158.31m Alteration from dyke contact
		158.31-195.49m Colour: Dark green Grain size: Very fine grained Massive Waxy serp (+talc?) along fracture surfaces 3-5% white blebs (magnesite xtals): anhedral-subhedral; soft Moderate magnetism	30	... 160.48-160.53m Carb serp vein		
			10	... 163.65m Zone of carb + serp ~down core axis (1.5cm width)		
			40	... 179.56-179.62m Serp carb vein		

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
						184.35-187.45 «flt» Core very broken up, gouge in places (recent flt?)
195.49 TO 216.41	«DIOR»	Colour: Grey green stippled Grain Size: Medium grained Massive Equigranular 30-40% mafics 195.91-198.89 «I DYKE» Colour: Grey Grain Size: Fine grained Cooling rim at 195.91m Moderate magnetism Amygdules 195.91-196.01m, 197.74-198.89m; at 195.91-196.01m, elongated ~90 deg CA 1% light silvery grey mineral 201.33-203.79m SERP 206.03-206.96m SERP 208.79-209.89m SERP 209.89-212.80m Alt serp, fg alt flow/dyke??? Colour: Grey green Grain size: Fine grained		Weak propylitic alt (becomes less alt with depth) Moderate-strong carbonate alt, pervasive 195.91-198.89m Strong pervasive carbonate alt 209.89-212.80m Weak carb alt 210.31-210.54m Mottled green and pink alt	trace po/py 206.03-206.96m 3-5% py/po, diss blebs 210.15-210.25m 5% po, tr-1% cpy	203.4-203.60m Fault
*****	*****	*****END OF HOLE*****	**	*****	*****	*****

Sample	From (m)	To (m)	Length (m)	COMMENTS
25851	3.35	5.25	1.90	
25853	9.75	11.28	1.53	
25854	11.28	12.90	1.62	
25855	12.90	14.02	1.12	
25856	14.02	15.54	1.52	
25857	15.54	17.24	1.70	
25858	17.24	18.64	1.40	
25859	18.64	19.96	1.32	
25860	19.96	21.51	1.55	
25861	21.51	23.01	1.50	
25862	23.01	24.51	1.50	
25863	24.51	26.01	1.50	
25864	26.01	27.72	1.71	
25865	27.72	28.22	0.50	
25866	28.22	28.72	0.50	
25867	28.72	29.22	0.50	
25868	29.22	29.72	0.50	
25869	29.72	30.22	0.50	
25870	30.22	30.72	0.50	
25871	30.72	31.22	0.50	
25872	31.22	31.72	0.50	
25873	31.72	32.40	0.68	
25874	32.44	33.94	1.50	
25875	33.94	35.44	1.50	
25876	35.44	36.94	1.50	
25877	36.94	38.44	1.50	
25878	38.44	39.94	1.50	
25879	39.94	41.44	1.50	
25880	41.44	42.94	1.50	
25881	42.94	44.44	1.50	
25882	44.44	45.94	1.50	
25883	45.94	47.44	1.50	
25884	47.44	48.28	0.84	
25886	63.01	64.01	1.00	
25888	77.72	79.19	1.47	
25889	79.19	80.50	1.31	
25890	80.50	81.50	1.00	
25901	85.20	86.00	0.80	

Sample	From (m)	To (m)	Length (m)
25897	86.87	88.37	1.50
25898	88.37	89.87	1.50
25899	89.87	91.37	1.50
25900	91.37	93.25	1.88
25891	95.51	96.01	0.50
25892	96.01	96.51	0.50
25893	96.51	97.01	0.50
25894	97.01	97.51	0.50
25895	97.51	98.01	0.50
25896	98.01	98.63	0.62
25902	100.28	101.58	1.30
25904	108.49	109.99	1.50
25905	109.99	111.49	1.50
25907	113.08	114.57	1.49
25908	114.57	116.07	1.50
25909	118.05	119.55	1.50
25910	119.55	121.05	1.50
25912	122.55	124.05	1.50
25913	124.05	125.85	1.80
25914	125.85	127.25	1.40
25915	127.25	128.25	1.00
25916	130.92	131.92	1.00
25917	132.79	133.79	1.00
25918	136.34	136.84	0.50
25919	138.30	139.55	1.25
25920	139.55	141.15	1.60
25921	146.58	148.08	1.50
25922	148.08	149.58	1.50
25923	149.58	151.08	1.50
25924	151.08	152.71	1.63
25927	182.00	183.50	1.50
25929	209.65	210.65	1.00
25930	210.65	212.65	2.00

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Sample	From (m)	To (m)	Length (m)
25852	5.25	8.25	3.00
25885	50.29	53.29	3.00
25887	75.68	77.68	2.00
25903	104.83	107.83	3.00
25906	111.49	113.08	1.59
25911	121.05	122.55	1.50
25925	152.71	155.71	3.00
25926	161.54	164.54	3.00
25928	198.94	201.34	2.40